

# Formatting Database Components

This chapter covers the following topics:

- Formatting Modes
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## Formatting Modes

There are three ADAFRM formatting modes:

1. Format a *new* dataset (...FRM functions). Only the dataset specified by the function name and the NUMBER parameter is accessed and formatted. The FROMRABN parameter cannot be specified when formatting a new dataset.
2. Format *part of an existing* dataset (ASSOFRM, DATAFRM, WORKFRM, and TEMPFRM functions). Here, the FROMRABN parameter *must* be specified, except on OS/390 and MVS/ESA platforms. When formatting Work and Data Storage (WORKFRM and DATAFRM functions), the ADAFRM job control must also contain the Associator datasets.

This formatting mode is used in combination with the ADADBS INCREASE function for ASSO and DATA. If a greater WORK is needed, then ADADEF NEWWORK should be used.

3. Reformat *blocks of an existing* dataset (...RESET functions). This mode opens all Associator, Data Storage, and Work datasets in the database for access. The FROMRABN parameter is *must* be specified for these functions.

## Syntax

Format the Associator (ASSO..) or Data Storage (DATA..) dataset:

```
ADAFRM { ASSOFRM | DATAFRM }  SIZE = size
                                [DEVICE = { device-type | ADARUN-device  }]
                                [{ FROMRABN = { starting-rabn | NEXT } |
                                 NUMBER = { dataset-number | 1 } }]
                                [NOUSERABEND]
```

Format the Work (WORK..), command log (CLOG..), protection log (PLOG..), or sort (SORT..) dataset:

```

ADAFRM { WORKFRM | CLOGFRM | PLOGFRM | SORTFRM }
        SIZE = size
        [DEVICE = { device-type | ADARUN-device } ]
        [ { FROMRABN = starting-rabn | NUMBER = {dataset-number | 1 } } ]
        [NOUSERABEND]

```

Format the recovery log (RLOG..) dataset:

```

ADAFRM RLOGFRM SIZE = size
        [DEVICE = { device-type | ADARUN-device } ]
        [NOUSERABEND]

```

Format a temp (TEMP..) dataset:

```

ADAFRM TEMPFRM SIZE = size
        [DEVICE = { device-type | ADARUN-device } ]
        [FROMRABN = starting-rabn ]
        [NOUSERABEND]

```

Reformat blocks of an existing Associator, Data Storage, or Work dataset:

```

ADAFRM { ASSORESET | DATARESET | WORKRESET }
        SIZE = size
        FROMRABN = start-rabn
        [NOUSERABEND]

```

## Essential Parameter

### SIZE: Size of Area to be Formatted

SIZE specifies the size of the area to be formatted (or reset). Blocks (a decimal value followed by "B") or cylinders may be specified. For the RLOGFRM function, the size must be the same as that specified by the RLOGSIZE parameter on the ADARAI utility's PREPARE function. See section Essential Parameter.

## Optional Parameters

### DEVICE: Device Type

DEVICE is the physical device type on which the area to be formatted is contained. If DEVICE is not specified, the device type specified by the ADARUN DEVICE parameter is used.

**FROMRABN: Starting RABN**

FROMRABN specifies the RABN at which formatting or resetting is to begin. This parameter may only be used for an existing dataset; NUMBER cannot be specified in the same ADAFRM job as FROMRABN.

When FROMRABN is specified with a ...FRM function, formatting begins at the FROMRABN point and continues up to the *highest complete track* before the RABN computed from FROMRABN + SIZE (assuming a size specified in or converted to blocks). This means that the last track within the specified range (FROMRABN + SIZE) will be formatted *only* if all the track's RABNs are within that range.

When increasing the size of an ASSO or DATA dataset, FROMRABN is available as an option only under VSE/ESA, VM/ESA or z/VM, and BS2000. The specified RABN must be one higher than the highest allocated RABN before the logical increase using ADADBS (which must precede the physical increase using ADAFRM). FROMRABN=NEXT instructs ADAFRM to take the first unformatted RABN as the value for FROMRABN. ADAFRM then verifies that the range of blocks determined for formatting by the NEXT value is contained in the free space table (FST). If not, ADAFRM terminates with ERROR-126. On OS/390, FROMRABN should only be used to reformat existing blocks as the last record pointer in the VTOC cannot be modified by function FROMRABN. See the examples for ADADBS INCREASE .

This parameter is *required* for the ASSORESET, DATARESET and WORKRESET functions. When specified with the function ASSORESET, the FROMRABN value must be greater than 30.

**NOUSERABEND: Termination without ABEND**

When an error is encountered while the function is running, the utility prints an error message and terminates with user ABEND 34 (with a dump) or user ABEND 35 (without a dump).

If NOUSERABEND is specified, the utility will *not* ABEND after printing the error message. Instead, the message "utility TERMINATED DUE TO ERROR CONDITION" is displayed and the utility terminates with condition code 20.

**NUMBER: Dataset Number**

NUMBER selects the nonsequential command log, nonsequential protection log, Associator, Data Storage and sort dataset to be formatted. The default is 1 (first dataset). Values allowed for

- the Associator (ASSO) or Data Storage (DATA) are 1 through 5;
- protection logs (PLOGs) or command logs (CLOGs) are 2 through 8;
- the recovery log (RLOG) is just 1;
- SORT is either 1 or 2 (1 only on VSE systems); and
- WORK or TEMP is either 1 or the default.

ADAFRM ...FRM function statements cannot specify (and will not default to) a NUMBER value if other ADAFRM statements in the same job specify a FROMRABN value.

NUMBER must match the number suffix of the related data definition ("DD/...") statement. See the tables of allowed statements and the examples in section JCL/JCS Requirements and Examples.

## Examples

### Example 1:

Format 50 cylinders for the Associator, 200 cylinders for Data Storage, 10 cylinders for Work, and 2 cylinders for the recovery log (RLOG).

```
ADAFRM ASSOFRM SIZE=50,DEVICE=3380
ADAFRM DATAFRM SIZE=200,DEVICE=3380
ADAFRM WORKFRM SIZE=10,DEVICE=3380
ADAFRM RLOGFRM SIZE=2
```

### Example 2:

One cylinder for nonsequential command log dataset 1, and 1 cylinder for nonsequential command log dataset 2 are to be formatted.

```
ADAFRM CLOGFRM SIZE=1,DEVICE=3350,NUMBER=1
ADAFRM CLOGFRM SIZE=1,DEVICE=3350,NUMBER=2
```

### Example 3:

The first two blocks of an existing Work dataset are to be reset to binary zeros.

```
ADAFRM WORKRESET FROMRABN=1,SIZE=2B
```

### Example 4:

Assuming the Data Storage dataset is on a 3380 disk (9 blocks/track, 15 tracks/cylinder), 100 cylinders-starting at cylinder position 201 relative to the beginning of the dataset-will be formatted.

```
ADAFRM DATAFRM SIZE=100,FROMRABN=26992
```

### Example 5:

Under VSE/ESA, VM/ESA, z/VM, or BS2000, assuming the Associator of the database has just been increased by 200 cylinders, this job formats the new space in the database. For more detailed examples across all supported platforms, see the ADADBS INCREASE examples in section Operating-System-Specific Procedures.

```
ADAFRM ASSOFRM SIZE=200,FROMRABN=NEXT
```